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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,811	08/31/2001	Rajiv Laroia	Flarion - 6 / APP	1403
26479	7590	05/11/2006	EXAMINER	
STRAUB & POKOTYLO 620 TINTON AVENUE BLDG. B, 2ND FLOOR TINTON FALLS, NJ 07724			TORRES, JUAN A	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,811

Applicant(s)

LAROIA, RAJIV

Examiner

Juan A. Torres

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-13, 15-20, 22-39, 41, 42, 44, 45, 51-55, 57 and 60-62 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-6, 8-13, 15-20, 22-26, 41, 42, 44, 45, 51-55 and 57 is/are allowed.
6) ☒ Claim(s) 27 and 60 is/are rejected.
7) ☒ Claim(s) 28-39, 61 and 62 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Regarding claim 27:

Applicant's arguments filed on 03/07/2006 have been fully considered but they are not persuasive.

The Applicant contends, "Jones patent does NOT discuss or disclose a "continuity prefix Portion".... The cyclic prefix 502 and the supplemental prefix 504 do not depend on the preceding symbol and are NOT For maintaining continuity".... Jones shows the supplemental cyclic prefix being appended to the cyclic prefix and does not show appending a cyclic prefix portion to the end of a continuity prefix portion".

The Examiner disagrees and asserts, that, Jones uses the prefixes uninterrupted in time between them and between the rest of the OFDM burst, attached together, so they are continuous, and the burst is a continuous because of them, if the prefixes are deleted, the burst will be discontinuous.

The Applicant contends, "The cyclic prefix 502 and the supplemental prefix 504 do not depend on the preceding symbol and are NOT For maintaining continuity".

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "The cyclic prefix 502 and the supplemental prefix 504 do not depend on the preceding symbol") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The Applicant contends, "Jones shows the supplemental cyclic prefix being appended to the cyclic prefix and does not show appending a cyclic prefix portion to the end of a continuity prefix portion".

The Examiner disagrees and asserts, that, Jones uses the two cyclic prefix and they are attached together, so Jones shows appending a cyclic prefix portion to the end of a prefix portion, been both continuous with each other. For these reasons and the reason stated in the previous Office action, the rejection of claim 27 is maintained.

Regarding claims 29, 1, 9, 12, 18, 41 and 51:

Applicant's arguments filed on 03/07/2006 have been fully considered and they are persuasive.

Claim Objections

Claims 62 is objected to because of the following informalities: in line 1 of claim 62 the recitation "Claim 60" is improper, because claim 60 has already been presented; it is suggested to be changed to "Claim 62" Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 27 and 60 are rejected under 35 U.S.C. 102(e) as being anticipated by Jones (US 6876675 B1).

As per claim 27 Jones discloses generating a multi-part prefix from a first periodic signal, the step of generating a multi-part prefix from the first periodic signal including performing a cyclic extension operation on the first periodic signal to generate a cyclic prefix portion (figure 5 block 504 column 6 line 58 to column 7 line 6); generating a continuity prefix portion (figure 5 block 502 column 6 line 58 to column 7 line 6); and appending the cyclic prefix portion to the end of the continuity prefix portion (figure 5 blocks 502 and 504 column 6 line 58 to column 7 line 6).

As per claim 60 Jones discloses a periodic signal generator module for generating a first periodic signal (figure 1 blocks 106 and 108; column 3 lines 11-35); and a prefix generation module including means for generating a multi-part prefix from a first periodic signal by performing a cyclic extension operation on the first periodic signal to generate a cyclic prefix portion, generating a continuity prefix portion; and appending the cyclic prefix portion to the end of the continuity prefix portion (figure 1 block 110; column 3 lines 31-45; and figure 5 blocks 502 and 504 column 6 line 58 to column 7 line 6).

Allowable Subject Matter

Claims 1-6, 8-13, 15-20, 22-26, 41-42, 44-45, 51-55 and 57 are allowed.

The following is an examiner's statement of reasons for allowance: claims 1-6, 8-13, 15-20, 22-26, 41-42, 44-45, 51-55 and 57 are allowed because the references cited fail to teach, as applicant has, generating a second prefix part from the included periodic

signal representing the preceding symbol; generating in parallel, for each one of N tones, a separate periodic signal including at least one high order harmonic signal component that is different from the fundamental frequency signal component of the tone, where the generated periodic signal includes a square wave, and transmitting the generated N periodic signals into a communications channel; separately generating, for each one of N tones, a passband periodic signal representing a symbol, at least some of the N generated passband periodic signals include a high order harmonic signal component in addition to a fundamental frequency signal component, the high order harmonic signal component having a frequency which is higher than the frequency of the fundamental signal component, and transmitting the N generated passband periodic signals; rotating the constellation of symbols from which consecutive symbols are transmitted using one of the N tones by a fixed amount which is function of the duration of the multi-part prefix; N periodic signal generator circuits for generating periodic signals, each periodic signal corresponding to a different tone one of the N tones of the multi-tone signal, where the generated periodic signal includes a square wave having a frequency component corresponding to one of the N tones of the multi-tone signal, as the applicant has claimed.

Claims 28-39 and 61-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Alberto Torres
3-14-2006

TEDESCHEN GHEBREYESAE
PRIMARY EXAMINER
3/14/06